

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A dual-band chip antenna comprising:

a chip base;

a meandering radiating metal line formed on at least two opposite surfaces of said chip base for generating a first operating band and a second operating band; ~~and~~

a connecting point for connecting said meandering radiating metal line to a signal transmission line; and

a microwave substrate for mounting said chip base and forming said signal transmission line, wherein said microwave substrate has a ground surface, and said ground surface is overlapped with a portion of the area underneath said dual-band chip antenna on said microwave substrate.

2. (previously amended) The dual-band chip antenna of claim 1, wherein a length of said meandering radiating metal line is about $1/4\lambda$ (wavelength) of a central frequency of said first operating band.

3. (previously amended) The dual-band chip antenna of claim 1, wherein the central frequency of said first operating band and a central frequency of said second operating band are first two resonant frequencies of said meandering radiating metal line.

4. (previously amended) The dual-band chip antenna of claim 1, wherein a shape of said chip base is selected from a group consisting of a rectangular prism, a square prism and a cylinder.

5. – 6. (cancelled)

7. (previously amended) The dual-band chip antenna of claim 1, wherein said meandering radiating metal line comprises:

a first segment formed on a first surface of said chip base, and said first surface is oriented toward said connecting point;

a second segment formed on a second surface opposite to said first surface of said chip base; and

a connecting segment for connecting said first segment and said second segment.

8. (previously amended) The dual-band chip antenna of claim 7, wherein said first segment comprises:

a substantially U-shaped segment having one end connected to one end of said connecting segment, and the other end connected to said transmission line.

9. (previously amended) The dual-band chip antenna of claim 7, wherein said second segment comprises:

a substantially U-shaped segment having one end connected to the other end of

said connecting segment; and

a substantially L-shaped segment on the same surface plane of said U-shaped segment of said second segment, having one end connected to the other end of said U-shaped segment of said second segment.

10. (previously amended) The dual-band chip antenna of claim 7, wherein a width of said meandering radiating metal line is variable while forming on said chip base.

11. – 13. (cancelled)

14. (currently amended) A dual-band chip antenna comprising:

a chip base ~~made of an FR4 material~~;

a meandering radiating metal line formed on at least two opposite surfaces of said chip base for generating a first operating band and a second operating band, having a length of about $1/4\lambda$ (wavelength) of a central frequency of said first operating band; and

a connecting point for connecting said meandering radiating metal line to a signal transmission line; and

a microwave substrate for mounting said chip base and forming said signal transmission line, wherein said microwave substrate has a ground surface, and said ground surface is overlapped with a portion of the area underneath said dual-band chip antenna on said microwave substrate.

15. (previously amended) The dual-band chip antenna of claim 14, wherein the central frequency of said first operating band and a central frequency of said second operating band are first two resonant frequencies of said meandering radiating metal line.

16. (previously amended) The dual-band chip antenna of claim 14, wherein a shape of said chip base is selected from a group consisting of a rectangular prism, a square prism and a cylinder.

17. (previously amended) The dual-band chip antenna of claim 14, wherein said meandering radiating metal line comprises:

a substantially U-shaped segment formed on a first surface of said chip base, having one end connected to said transmission line, and said first surface is oriented toward said connecting point;

a substantially U-shaped segment formed on a second surface opposite to said first surface of said chip base;

a substantially L-shaped segment on the same surface plane of said substantially U-shaped segment, having one end connected to one end of said substantially U-shaped segment formed on said second surface; and

a connecting segment for connecting the other end of said substantially U-shaped segment formed on said first surface to the other end of said substantially U-shaped segment formed on said second surface.

18. (previously amended) The dual-band chip antenna of claim 14, wherein a width of said meandering radiating metal line is variable while forming on said chip base.

19. – 20. (cancelled)